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SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,
KURILE ISLANDS, 23 MARCH 1975

J. R. Woolson, et al

Teledyne Geotech

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Kurile Islands, 23 March 1975

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September 1975

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SDCS Event Report No. 23

Kurile Islands, 23 March 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	Origin Time	Latitude	Longitude	m_b	M_s
NORSAR	19:48:03	45.9N	153.2E	5.8	N/A
LASA	19:48:18	47.5N	153.6E	5.7	N/A
PDE	19:47:58	46.7N	152.5E	5.5	4.4
Hagfors Array, Sweden	19:47:58	46 N	153 E	6.6	5.0

Using SDCS stations, LASA and NORSAR, the epicenter location becomes

SDCS & Arrays	19:48:08	46.2N	152.2E	5.5	4.5
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FN-WV was not operational for this event.

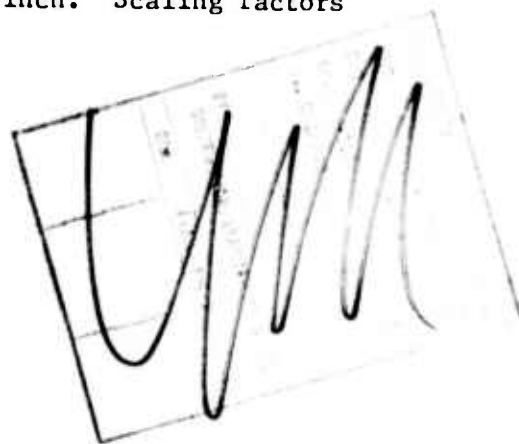
Short-period signals associated with this event were recorded at all operational SDCS stations, LASA and NORSAR. Unknown magnifications at RK-ON and CPSO prevented magnitude determinations for those stations.

Long-period signals were recorded at WH2YK, HN-ME, and CPSO. High background noise prevented a definite amplitude determination at RK-ON. NORSAR and ALPA did not record the signal. LASA long-period array data was unrecoverable.

SDCS horizontal channels except WH2YK LP, CPSO SP and LP, and RK-ON SP have been rotated to orientations radial and transverse to this location.

Details of the program used to obtain beamed vertical, radial and transverse long-period data at ALPA and NORSAR are in the process of being reviewed. Vertical beams are probably valid, horizontal beams questionable.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.



STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES		ELEVATION METERS	INSTRUMENTATION	
		DEG	MN SECS		SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14	00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35	41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32	58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41	19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09	43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49	25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50	20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41	41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

HYPOCENTER DETERMINATION

INPUT FOR EVENT 23 MAR 75
 19:48:08.0 46.700N 152.500E 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST	REST	REST
WH2YK	19 56 05.2	0.1	0.3	43.4	43.2
LAO	19 58 42.3	0.4	0.8	64.8	48.2
RK-ON	19 59 00.0	-0.8	-1.3	67.9	38.6
NAO	19 59 07.0	-0.1	0.2	68.8	340.8
HN-ME	20 00 20.0	0.6	-0.1	81.5	27.0
CPO	20 00 30.5	-0.3	-0.0	83.4	43.9

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LCNG.	DEPTH (KM)	SDV	IT	STA
19:48:40.7	47.823N	152.758E	266. CALC	0.5	5	6
19:48:02.1	46.215N	152.171E	0. REST	0.7	3	6

CALC

```

  1 . 1
0   .   4
0   0. 0   0
.   .   .   .   .
0   0. 0   0
  0   .   0
    0 . 0
  
```

REST

```

  1 . 1
0   .   4
0   0. 0   0
.   .   .   .   .
0   0. 0   0
  0   .   0
    0 . 0
  
```

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 0.96
 MAJOR 144.7KM. MINOR 42.6KM. AZ= 7 AREA= 19350 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 23 MAR 75
19:48:08.0 46.700N 152.500E 0KM.

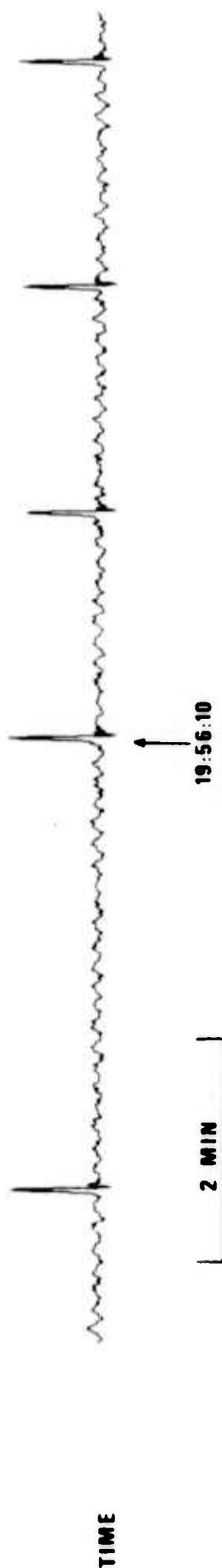
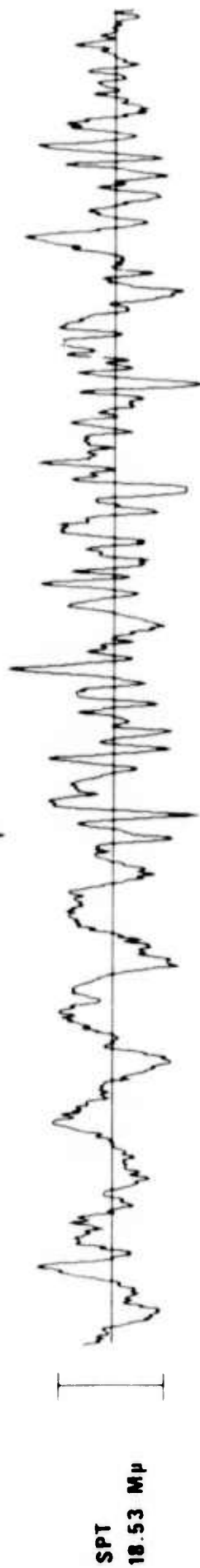
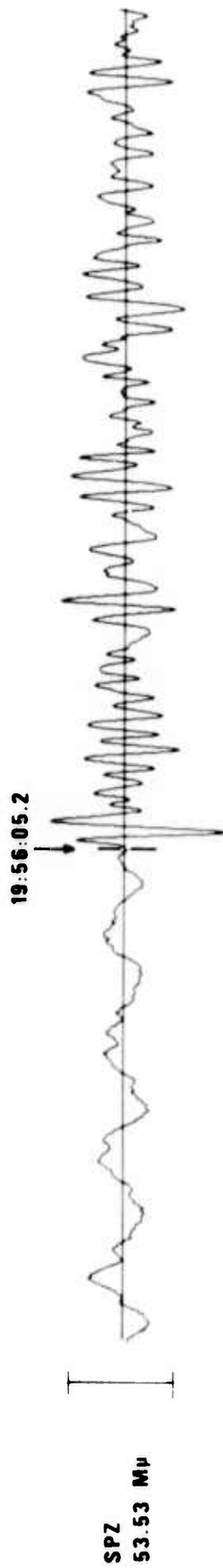
STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MR	MS		
WH2YK	EP	19 56	05.2	SPZ	0.9	76.	5.08			43.4
WH2YK	LR	20 13	00.0	LPZ	22.0	57.		4.51		43.4
LAC	EP	19 58	42.3	AB	1.0	88.	5.64			64.8
RK-ON	EP	19 59	00.0	SPZ	0.8	??				
NAO	EP	19 59	07.0	AB	0.6	132.	5.82			68.8
HN-ME	EP	20 00	20.0	SPZ	0.8	70.	5.39			81.5
HN-ME	LQ	20 25	18.0	LPT	26.0	72.				
HN-ME	LR	20 33	57.0	LPZ	29.0	32.		4.54		81.5
CPO	EP	20 00	30.5	SPZ	0.8	??				
CPO	LR	20 35	08.0	LPZ	24.0	71.		4.89		83.4

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LP MAG	LP SDV	LP STA
19:48:40.7	47.823N	152.758E	266. CALC	5.06	0.27	4	4.50*****		1
19:48:02.1	46.215N	152.171E	0. BEST	5.48	0.32	4	4.51*****		1

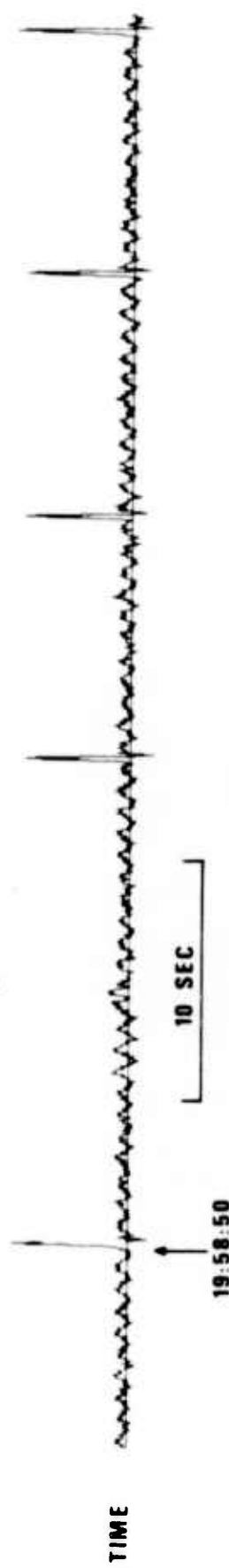
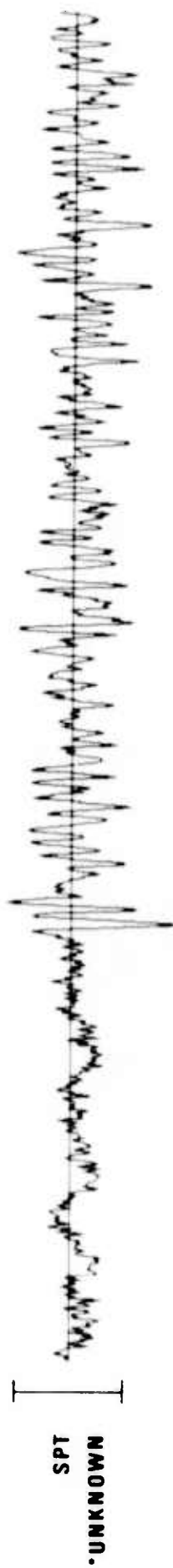
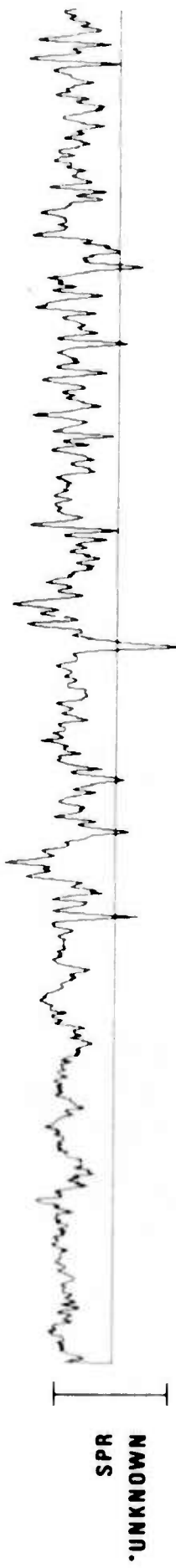
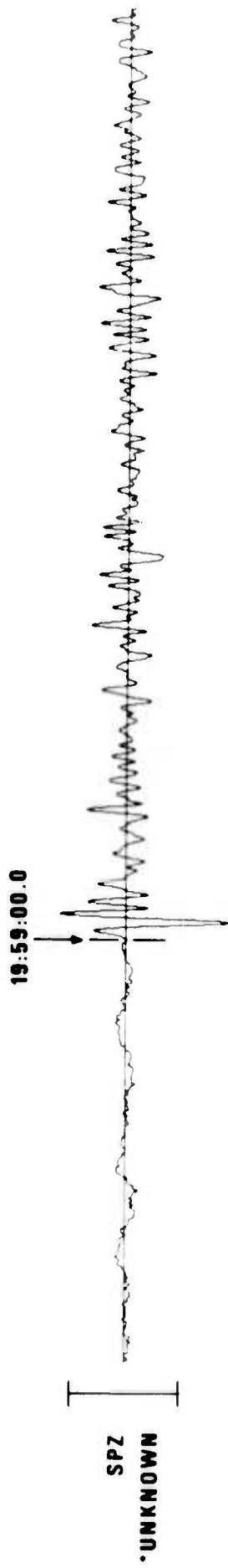
Short-period magnitudes (m_b) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

Average long-period magnitude (M_s) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

WH2YK 23 MAR 75



RK-ON 23 MAR 75



*GAINS UNKNOWN. CALIBRATIONS INVALID DUE TO ERRATIC CALIBRATOR OPERATION

HN-ME 23 MAR 75

20:00:20.0

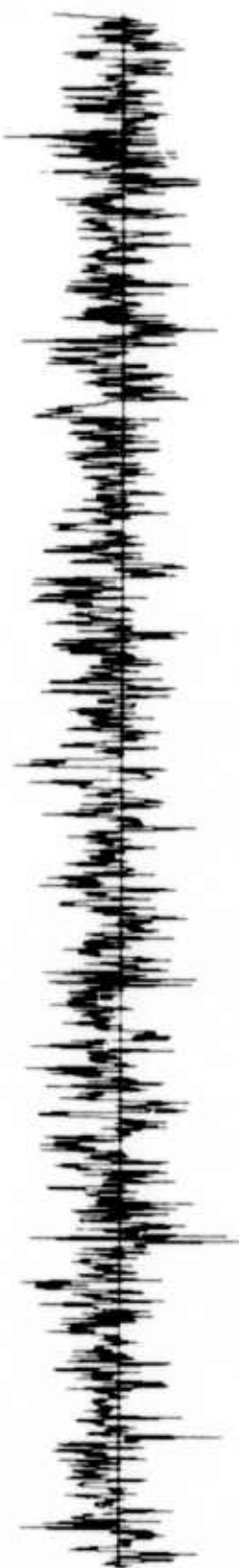
I

SPT
52.95 Mμ



I

SPR
50.44 Mμ

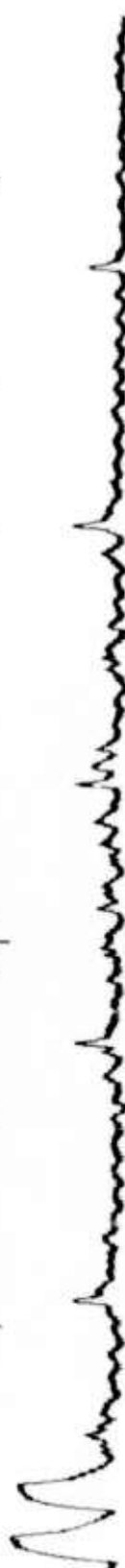


I

SPT
37.40 Mμ



TIME

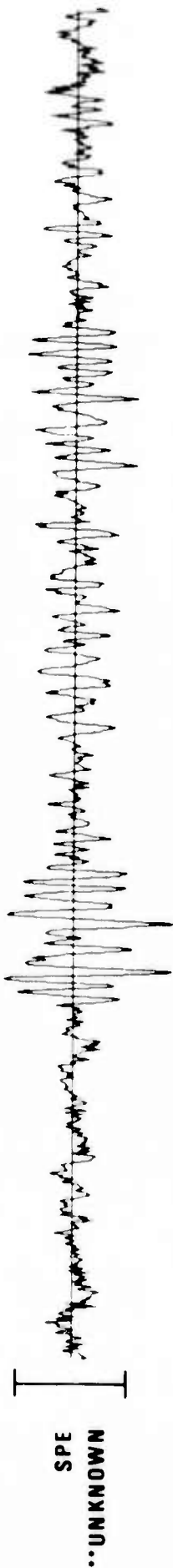
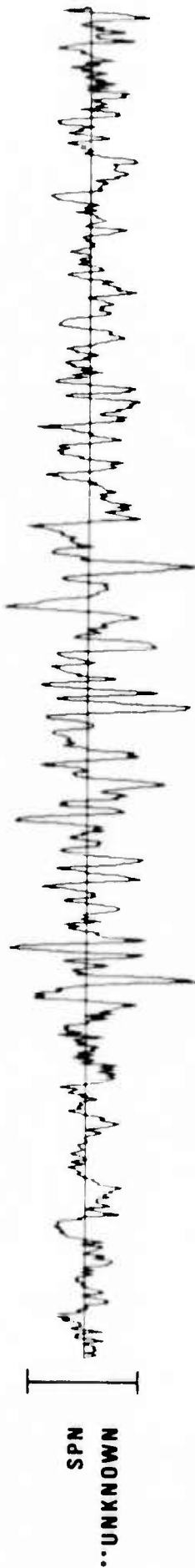
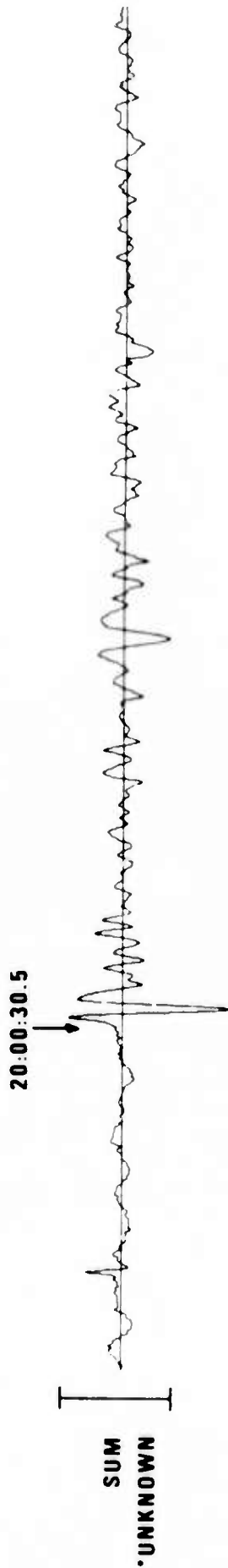


10 SEC

20:00:30

2-

CPSO 23 MAR 75



*NUMBER OF INSTRUMENTS CONTRIBUTING TO SUMMATION UNKNOWN

**HORIZONTAL INSTRUMENTS NOT ROTATED

LASA

1 23 MAR 1975

2 19 48 18 47.5N 153.6E 35G B 5.5 221 KURILE ISLANDS

3 19 58 42.4 LAO P 69.9 1.0 16.7 63.3 311.6

EPX 64530

BP-B 0.6-2.0 HZ

ABN 14

19.58.32.4

AB 210

FAB 170

PAB1 140

PAB2 140

PAB3 150

PAB4 160

9<

10 SEC

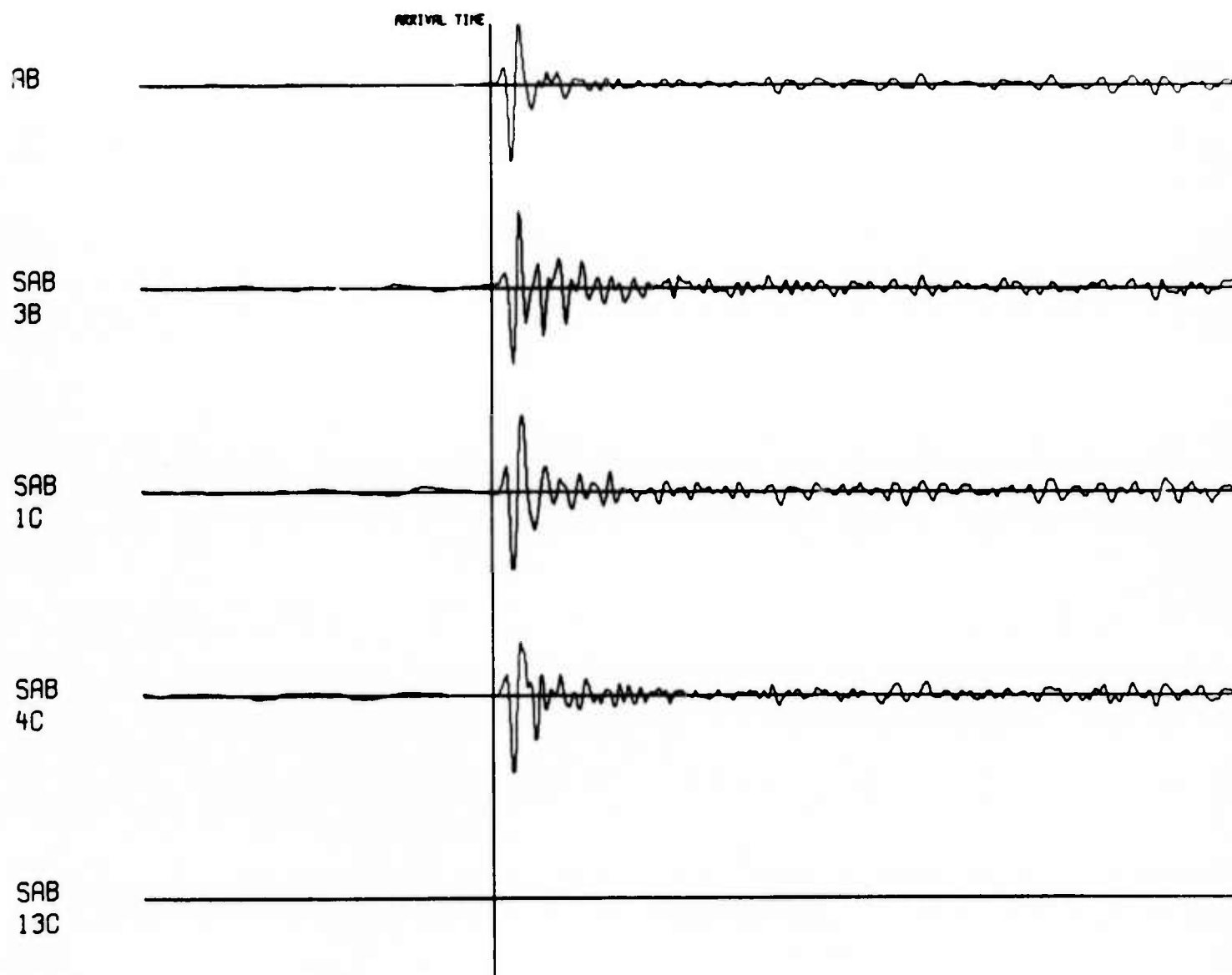
NORSAR EVENT FILE

1975 MAR 23

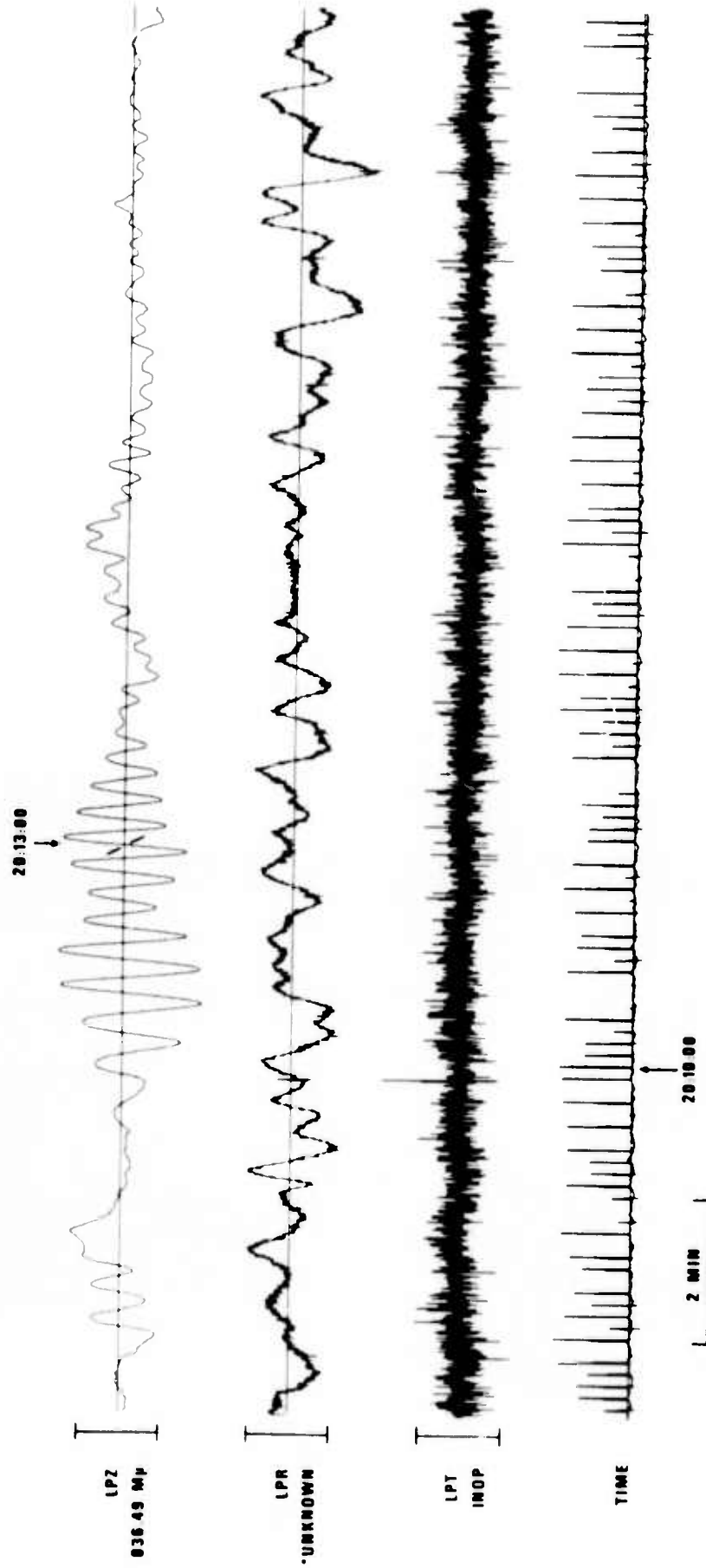
EPX NO. 57350 ARR. 19.59.6.8 45.9N 153.2E 5.8MB 33KM

DIST = 69.3 AZI = 27.1 AMP = 103.3 PER = 0.9 UMETH 2

SCALE  = 5 SECONDS

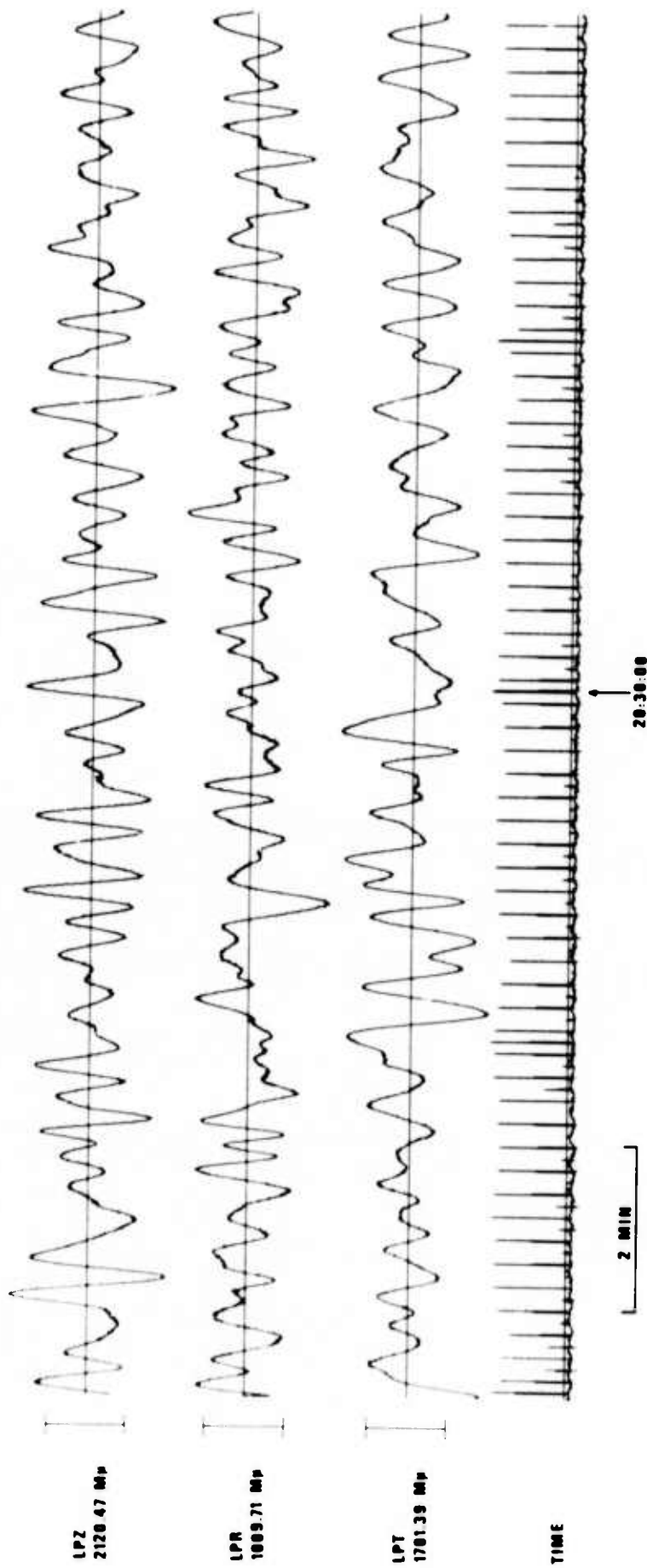


WH2YK 23 MAR 75

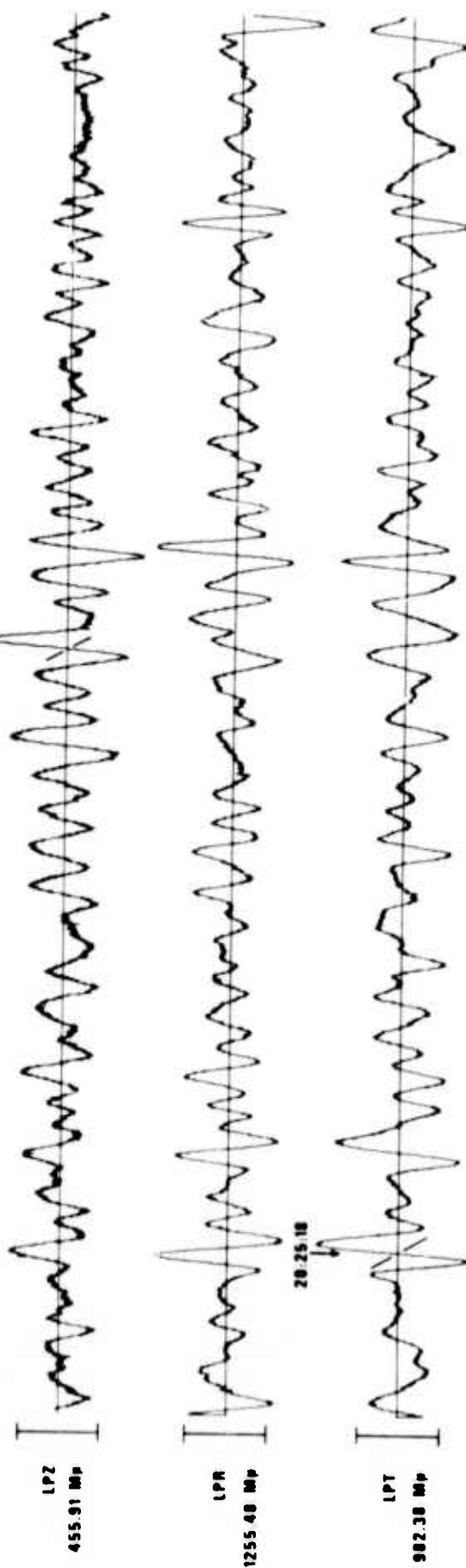


*LPR INSTRUMENTS NOT RESPONSIVE TO CALIBRATION

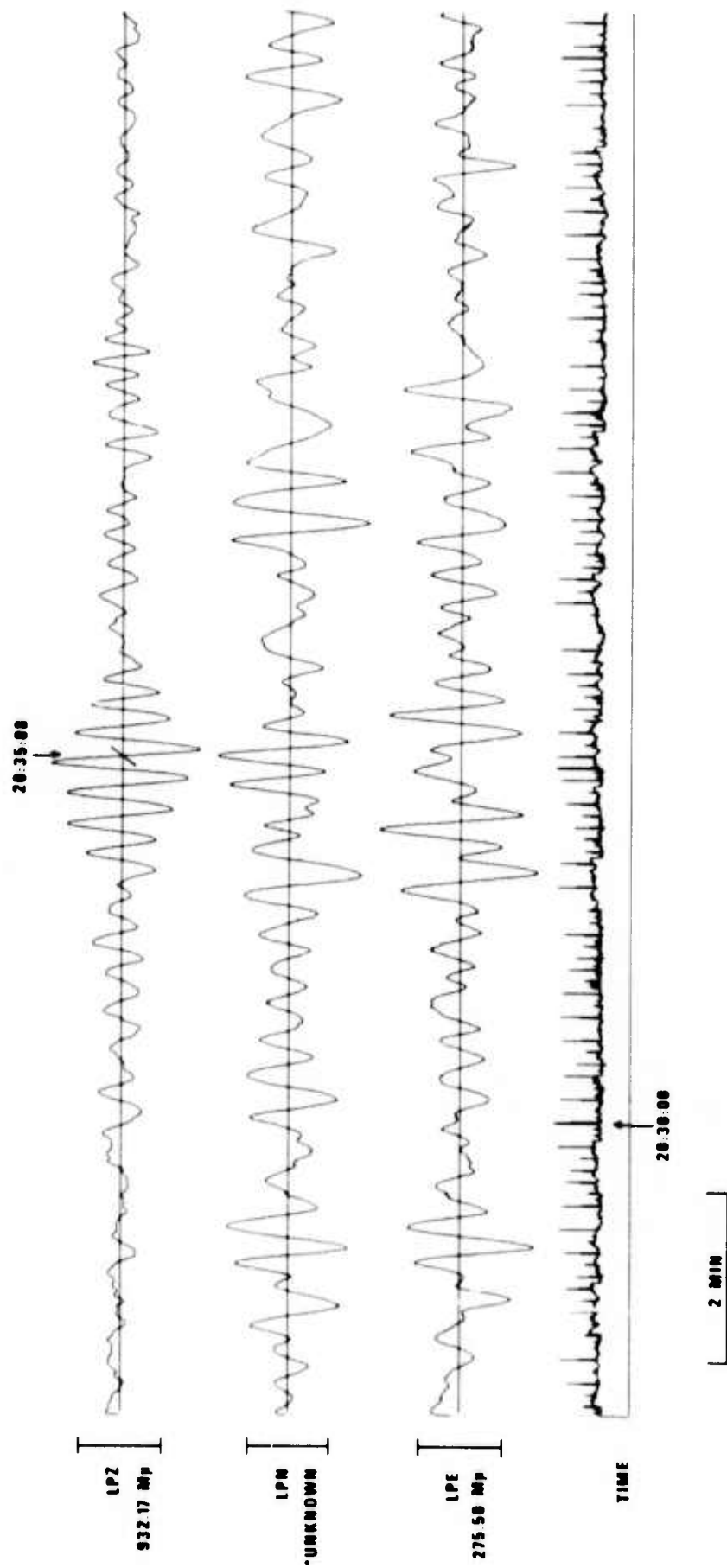
RK-ON 23 MAR 75



HN-ME 23 MAR 75



CPSO 23 MAR 75



*LPR CALIBRATION ERRATIC : GAIN UNRESOLVED

ALPA LONG-PERIOD BEAMS 23 MAR 75

LP VERTICAL

86.48



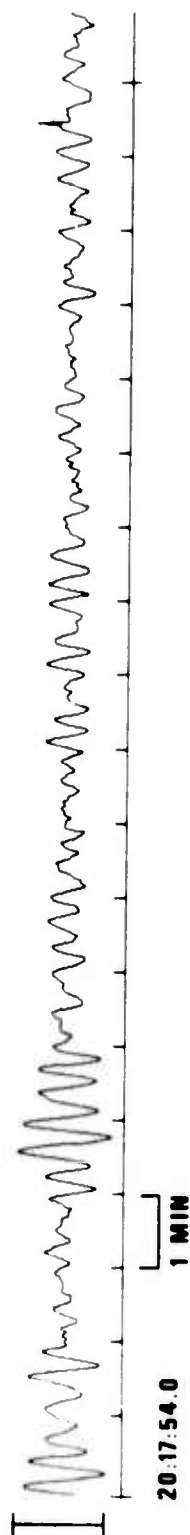
LP RADIAL

72.71



LP TRANSVERSE

108.20



NORSAR LONG-PERIOD BEAMS 23 MAR 75

LP VERTICAL

59.52



LP RADIAL

73.77



LP TRANSVERSE

92.58



19:51:26.0 1 MIN